

CLAIMS

The invention claimed is:

1. A method, comprising the steps of:
receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and requesting subscriber information from a home registration database located on a second network, the first and second networks using disparate messaging protocols;
converting the first network messaging protocol of the originating message into a second network messaging protocol;
forwarding the converted originating message to the home registration database of the second network;
receiving a responding message from the second network, the responding message having the second network messaging protocol;
converting the second network messaging protocol of the responding message into the first network messaging protocol; and
forwarding the converted responding message to an originator on the first network.
2. The method of claim 1, wherein said step of converting the first network messaging protocol further comprises a step of deriving a destination point code in the second network.
3. The method of claim 1, wherein said step of converting the second network messaging protocol further comprises a step of deriving a destination point code in the first network.
4. The method of claim 1, wherein said step of converting the first network messaging protocol further comprises a step of converting a format of an originator's address.

5. The method of claim 1, wherein said step of converting the second network messaging protocol further comprises a step of converting a format of an originator's address.

6. The method of claim 1, wherein said step of converting the first network messaging protocol further comprises a step of converting a format of a destination address.

7. The method of claim 1, wherein said step of converting the second network messaging protocol further comprises a step of converting a format of a destination address.

8. An apparatus, comprising:

a means for receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and requesting subscriber information from a home registration database located on a second network, the first and second networks using disparate messaging protocols;

a means for converting the first network messaging protocol of the originating message into a second network messaging protocol;

a means for forwarding the converted originating message to the home registration database of the second network;

a means for receiving a responding message from the second network, the responding message having the second network messaging protocol;

a means for converting the second network messaging protocol of the responding message into the first network messaging protocol; and

a means for forwarding the converted responding message to an originator on the first network.

9. The apparatus of claim 8, wherein said means for converting the first network messaging protocol further comprises a means for deriving a destination point code in the second network.

10. The apparatus of claim 8, wherein said means for converting the second network messaging protocol further comprises a means for deriving a destination point code in the first network.

11. The apparatus of claim 8, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of an originator's address.

12. The apparatus of claim 8, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of an originator's address.

13. The apparatus of claim 8, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of a destination address.

14. The apparatus of claim 8, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of a destination address.

15. An article comprising a system for conveying transactional messages over disparate networks, said system comprising:

- a means for receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and requesting subscriber information from a home registration database located on a second network, the first and second networks using disparate messaging protocols;
- a means for converting the first network messaging protocol of the originating message into a second network messaging protocol;
- a means for forwarding the converted originating message to the home registration database of the second network;

a means for receiving a responding message from the second network, the responding message having the second network messaging protocol;

a means for converting the second network messaging protocol of the responding message into the first network messaging protocol; and

a means for forwarding the converted responding message to an originator on the first network.

16. The article of claim 15, wherein said means for converting the first network messaging protocol further comprises a means for deriving a destination point code in the second network.

17. The article of claim 15, wherein said means for converting the second network messaging protocol further comprises a means for deriving a destination point code in the first network.

18. The article of claim 15, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of an originator's address.

19. The article of claim 15, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of an originator's address.

20. The article of claim 15, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of a destination address.

21. The article of claim 15, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of a destination address.

22. A method, comprising the steps of:

receiving a telephone transaction initiation or response message that originated with a telephone set or node currently located in a first network, the message bearing an originator's registration number identifying a subscriber whose home registration is located in a second network, or the address of the initiating or responding node in the first network, the first and second networks using disparate signaling protocols;

querying the originator's home registration database using the network protocol of the second network to determine the registration status of the originator;

forwarding registration status information to the first network in the network protocol of the first network.

23. The method of claim 22, further comprising the step of converting a format of said initiation message into a format utilized by said first network.

24. The method of claim 23, wherein said step of converting said format of said message is performed by matching values of said format of said message with values of said format utilized by said first network.

25. The method of claim 22, further comprising the step of converting an address of said telephone set from a format utilized by said second network into a format utilized by said first network.

26. The method of claim 22, further comprising the step of generating a destination point code.

27. The method of claim 26, wherein the step of generating a destination point code further comprises inserting a virtual point code.

28. An apparatus, comprising:

means for receiving a telephone transaction initiation message that originated with a telephone set currently located in a first network, the call initiation message bearing an

originator's registration number identifying a subscriber whose home registration is located in a second network, the first and second networks using disparate signaling protocols;

means for querying the originator's home registration database using the network protocol of the second network to determine the registration status of the originator; and

means for forwarding registration status information to the first network in the network protocol of the first network.

29. The apparatus of claim 28, further comprising means for translating a format of said initiation message into a format utilized by said first network.

30. The apparatus of claim 29, wherein said means for translating said format of said message perform said translation by matching values of said format of said message with values of said format utilized by said first network.

31. The apparatus of claim 28, further comprising means for translating an address of said telephone set from a format utilized by said second network into a format utilized by said first network.

32. The apparatus of claim 28, further comprising means for generating a point code.

33. A method, comprising the steps of:
receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and having a first virtual point code as its destination point code;
converting the first network messaging protocol of the originating message into a second network messaging protocol;
forwarding the converted originating message to a home registration database of the second network;

receiving a responding message from the second network, the responding message having the second network messaging protocol and having a second virtual point code as its destination point code;

converting the second network messaging protocol of the responding message into the first network messaging protocol; and

forwarding the converted responding message to an originator on the first network.

34. The method of claim 33, wherein said step of forwarding the converted originating message to the home registration database further comprises a step of replacing the first virtual point code with a destination code identifying a node on the second network.

35. The method of claim 33, wherein said step of forwarding the converted responding message to the originator further comprises a step of replacing the second virtual point code with a destination code identifying a node on the first network.

36. The method of claim 33, wherein said step of converting the first network messaging protocol further comprises a step of deriving a destination point code in the second network.

37. The method of claim 33, wherein said step of converting the second network messaging protocol further comprises a step of deriving a destination point code in the first network.

38. The method of claim 33, wherein said step of converting the first network messaging protocol further comprises a step of converting a format of an originator's address.

39. The method of claim 33, wherein said step of converting the second network messaging protocol further comprises a step of converting a format of an originator's address.

40. The method of claim 33, wherein said step of converting the first network messaging protocol further comprises a step of converting a format of a destination address.

41. The method of claim 33, wherein said step of converting the second network messaging protocol further comprises a step of converting a format of a destination address.

42. An apparatus comprising:

a means for receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and having a first virtual point code as its destination point code;

a means for converting the first network messaging protocol of the originating message into a second network messaging protocol;

a means for forwarding the converted originating message to a home registration database of the second network;

a means for receiving a responding message from the second network, the responding message having the second network messaging protocol and having a second virtual point code as its destination point code;

a means for converting the second network messaging protocol of the responding message into the first network messaging protocol; and

a means for forwarding the converted responding message to an originator on the first network.

43. The apparatus of claim 42, wherein said means for forwarding the converted originating message to the home registration database further comprises a means for replacing the first virtual point code with a destination code identifying a node on the second network.

44. The apparatus of claim 42, wherein said means for forwarding the converted responding message to the originator further comprises a means for replacing the second virtual point code with a destination code identifying a node on the first network.

45. The apparatus of claim 42, wherein said means for converting the first network messaging protocol further comprises a means for deriving a destination point code in the second network.

46. The apparatus of claim 42, wherein said means for converting the second network messaging protocol further comprises a means for deriving a destination point code in the first network.

47. The apparatus of claim 42, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of an originator's address.

48. The apparatus of claim 42, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of an originator's address.

49. The apparatus of claim 42, wherein said means for converting the first network messaging protocol further comprises a means for converting a format of a destination address.

50. The apparatus of claim 42, wherein said means for converting the second network messaging protocol further comprises a means for converting a format of a destination address.

51. A method, comprising the steps of:
receiving a first telephonic transaction message from a destination on a first network, the first telephone transaction message having a first network messaging protocol and being directed to a destination on a second network, the first and second networks using disparate messaging protocols;
converting the first network messaging protocol of the first telephone transaction message into a second network messaging protocol;

forwarding the converted first telephone transaction message to the second network;
wherein said step of converting the first network messaging protocol comprises a one-step table-driven conversion.

52. The method of claim 51, wherein said step of converting said first network messaging protocol is performed by matching values of a format of said first telephone transaction message with values of a format utilized by said second network.

53. The method of claim 51, further comprising the step of converting an address of said destination on said second network from a format utilized by said first network into a format utilized by said second network.

54. The method of claim 53, further comprising a step of generating a destination point code.

55. The method of claim 54, wherein the step of generating the destination point code further comprises inserting a virtual point code.

56. An apparatus comprising:
means for receiving a first telephonic transaction message from a destination on a first network, the first telephone transaction message having a first network messaging protocol and being directed to a destination on a second network, the first and second networks using disparate messaging protocols;
means for converting the first network messaging protocol of the first telephone transaction message into a second network messaging protocol; and
means for forwarding the converted first telephone transaction message to the second network;
wherein said means for converting the first network messaging protocol comprises a means for accomplishing a one-step table-driven conversion.

57. The apparatus of claim 56, wherein said means for converting said first network messaging protocol are configured to match values of a format of said first telephone transaction message with values of a format utilized by said second network.

58. The apparatus of claim 56, further comprising a means for converting an address of said destination on said second network from a format utilized by said first network into a format utilized by said second network.

59. The apparatus of claim 58, further comprising a means for generating a destination point code.

60. The apparatus of claim 59, wherein said means for generating a destination point code further comprises a means for inserting a virtual point code.

61. The apparatus of claim 56, further comprising a means for implementing origin-based routing.

62. The apparatus of claim 56, further comprising an odd/even indicator.